

Appl. No. 09/751,971
Amdt. Dated January 19, 2005
Reply to Office action of October 19, 2004
Attorney Docket No. P12651/64645-1044
EUS/JIP/05-6012

REMARKS/ARGUMENTS

1.) Claim Amendments

The Applicant has amended Claims 1, 3-5, 8-9, 13, 15, 17, 28, and 34-37; Claims 21-27 and 39-42 have been cancelled. Applicant respectfully submits no new matter has been added. Accordingly, Claims 1-20 and 28-38 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Examiner Objections - Claims

The Examiner objected to Claims 3-5, 8-9 and 34-38 because of informalities. Applicant extremely appreciates the Examiner's thorough review of the claims. Applicant has amended the claims as suggested by the Examiner in order to correct the informalities. The Examiner's favorable reconsideration of the amended claims is respectfully requested.

3.) Claim Rejections – 35 U.S.C. § 112

The Examiner rejected Claims 1-20, 25, and 34-38 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Again, Applicant appreciates the Examiner's careful review of the pending claims and submits that appropriate corrections have been made to those identified claims. A favorable reconsideration is therefore respectfully requested.

4.) Claim Rejections – 35 U.S.C. § 102(e)

The Examiner rejected claims 1-5, 10-11, 20-21, 38-36, 39, and 41-42 under 35 U.S.C. § 102(e) as being anticipated by Forslow (2003/0039237). Applicant respectfully traverses the Examiner's rejection and has further amended the pending independent claims to more clearly and distinctly claim the subject matter which Applicant considers as his invention. The Examiner's favorable reconsideration in view of the above claim amendments and the following remarks is earnestly requested.

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The present invention discloses and claims a method and apparatus for managing subscriber data in a telecommunication system. In a conventional telecommunication system, as fully illustrated on Figs 1 and 5 of the present application, a home location register (HLR) maintains the permanent subscriber data associated with a particular mobile station. As that particular mobile station roams and travels into a particular service area, the subscriber data stored within the HLR are then downloaded and copied into a temporarily database serving that particular service area. However, in a conventional system, two separate temporarily databases are used to service such a mobile station traveling within that service area. A visitor location register (VLR) is used for storing subscriber data for circuit switching services and a database within a serving general packet radio service support node (SGSN) is used for storing subscriber data for packet switching services. In other words, two different temporarily databases are used for storing the requisite subscriber data to provide both the circuit and packet switching services for the same mobile station traveling within that service area. The signaling complexity associated with communicating and maintaining subscriber data between multiple databases (e.g. VLR and SGSN) as the mobile station travels out of an old service area and moves into a new service area is illustrated in Fig. 3 of the present application.

Accordingly, in accordance with the teachings of the present invention, a single universal database (second database) is introduced wherein the second database stores subscriber data that are needed for providing both the circuit and packet switching services within a particular service area. As further recited in now amended independent Claim 1, in response to receiving one or more messages from a mobile station, the present invention requests the subscriber data from a first database wherein the subscriber data includes both circuit switching data as well as packet switching data. As further recited in independent Claim 1, the first database is the database that maintains and stores the subscriber data associated with that particular mobile station. As further recited in dependent Claim 2, the first database includes a home location register (HLR). After receiving the requested subscriber data, the data are then stored within a second database serving that particular service area currently covering that

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mobile station. The second database as further recited in dependent Claim 3 includes the universal visitor location register in accordance with the teachings of the present invention. As further recited, the second database is then communicably coupled to the first switch for providing circuit switching services to that mobile station within that service area as well as communicably coupled to the second switch for providing packet switching services to that same mobile station within that same service area.

Applicant submits that such universal visitor location register for storing both circuit and packet switching data and communicably coupled to both circuit and packet switches for providing circuit and packet switching services is not anticipated or taught by the cited references.

In that regard, Applicant respectfully submits that the cited Forslow reference merely discloses or teaches a system for determining whether a circuit switched bearer or a packet switched bearer is better suited to transport a particular application flow based on the corresponding quality of service (QoS). As an example, in Forslow, a determination is made as to whether an application flow is requesting a real time service or a non-real time service. A circuit switched bearer is allocated if the request is for a real time service, and a packet switched bearer is allocated if the request is for a non-real time type of service (Forslow, paragraph 24). However, nothing in Forslow discloses or teaches a second database storing both circuit-switching data as well as packet-switching data and communicably coupled to the first switch for providing circuit switching services and further coupled to the second switch for providing packet switching services in accordance with the teachings of the present invention. On the contrary, Forslow actually teaches away from the present invention by following the conventional way of storing and maintaining subscriber data by disclosing that "when a mobile station enters a visiting network or service area, the corresponding VLR 44 requests and receives data about the roaming subscriber station from the mobile's HLR and stores it." (Forslow, paragraph 10). Accordingly, within a circuit-switching network in Forslow, the VLR still requests and stores subscriber data for a roaming mobile station. As for the packet-switching network, Forslow further discloses that all "GPRS user-related data needed by the SGSN to perform routing and data transfer functions is

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accessed from the HLR 42 via the SS7 network 40." (Forslow, paragraph 13). Accordingly, SGSN maintains such subscriber data by communicating directly with the mobile's HLR.

In rejecting the above claims, the Examiner stated that the abstract and paragraph 0075 of Forslow reciting "the mobile station being connected via a circuit switch and/or a packet switch as instructed using subscription information from the HLR database clearly anticipated the first switch and second switch for providing circuit and packet switching services to the mobile station." However, Applicant respectfully submits that Forslow fails to disclose "the second database serving that particular service area currently covering said mobile station" as claimed by the present invention. The HLR mentioned by the Examiner is the first database in the present invention and is not associated with any particular service area. Accordingly, even though Forslow may disclose the steps of retrieving subscriber data from a first database (HLR), the recited steps of receiving and storing that subscriber data in a second database that services both the first switch for providing circuit switching services and a second switch for providing packet switching services are not disclosed or taught by Forslow.

As a result, no second database (universal visitor location register) is disclosed or taught by Forslow for servicing both the circuit switching services as well as packet switched services.

Applicant therefore believes independent Claim 1 and its dependent claims are patentable over the cited references and a Notice of Allowance is respectfully requested. All other pending independent claims and their respective dependent claims recite similar limitations and are likewise allowable over the cited references.

Applicant further submits that in order to reduce the number of independent claims, Applicant has cancelled Claims 21-27 and 39-42 without prejudice.

5.) Double Patenting Rejection

The Examiner further rejected claims 1-11, 16-17, 20-22, and 24-42 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17-32 of U.S. Patent No. 6,731,932. In view of the above amendments and

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remarks, Applicant respectfully submits that the presently pending claims are patentably distinct from those claims of U.S. Patent No. 6,731,932 (Rune). More particularly, claims 17-32 of the Rune patent recite a system for updating subscriber profile within a new visitor location network entity from the previous visitor network entity and has nothing to do with providing a second database (universal visitor location register) for storing subscriber data that are needed for servicing both circuit switching services as well as packet switching services as disclosed and claimed in the present application.

6.) Allowable Subject Matter

The Applicant notes with appreciation the conditional allowance of claims 12-15 and 18-19. However, in view of the above amendments and remarks, Applicant respectfully submits that now amended independent claims are patentable over the cited references.

7.) Prior Art Not Relied Upon

In paragraph 9 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure.

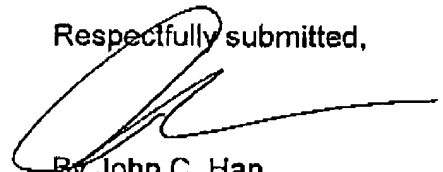
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CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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